

Laws of Exponents

Foundations of Mathematics and

Pre-Calculus 10

October 17, 2013

Recall: Laws of Exponents

Multiplying Exponents: Keep the base AND add exponents.

Dividing Exponents: Keep the based AND subtract exponents.

Powers: Keep the base AND multiply exponents

Product of powers:

$$a^m \cdot a^n = a^{m+n}$$

Quotient of powers:

$$a^m \div a^n = a^{m-n}, a \neq 0$$

Power of a power:

$$(a^m)^n = a^{mn}$$

Power of a product:

$$(ab)^m = a^m b^m$$

Power of a quotient:

$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}, b \neq 0$$

Practice

Pg 241

3 a,d

8

4 a,d

10 a,c,e,g

5 a,c

16

6 a,d

7